

Patent Claims

1. A method for producing an RFID label using a printing process, characterized in that at least part of the antenna which is required for functioning and of the tuned circuit is applied to the printing material by sheet-fed offset printing.
- 10 2. The method as claimed in claim 1, characterized in that a conductive paste or printing ink is used for printing the conductor tracks.
- 15 3. The method as claimed in claims 1 and 2, characterized in that the conductive printing ink is an ink having metallic particles.
- 20 4. The method as claimed in claims 1 and 2, characterized in that the conductive ink contains carbon black or carbon fibers.
- 25 5. The method as claimed in claims 1 and 2, characterized in that the ink is applied in a sheet-fed offset press having a gripper transport means.
- 30 6. The method as claimed in claims 1 and 2, characterized in that the ink is applied within a web-fed offset press.
- 35 7. The method as claimed in claim 5, characterized in that the constituent parts of the antenna/the tuned circuit are applied to the rear side of the sheet, and the sheet is subsequently tumbled in a turner device.
8. The method as claimed in claim 1, characterized in that, after the constituent parts of the antenna/the tuned circuit have been printed, a protective varnish or a protective ink is applied.

9. The method as claimed in claim 8, characterized in that the protective varnish or protective ink is transferred via a sheet-fed offset printing unit.

5 10. The method as claimed in claim 8, characterized in that the protective varnish is transferred via a flexographic printing unit having a chamber type doctor and an engraved roll.

10 11. The method as claimed in claim 8, characterized in that the protective varnish is applied via a two-roll flexographic printing unit.

15 12. A method for producing an RFID label using a printing process, characterized in that at least part of the antenna which is required for functioning and of the tuned circuit is applied, directly or indirectly, by way of a relief printing plate.

20 13. The method as claimed in claim 12, characterized in that the relief printing plate is clamped onto a plate cylinder of a sheet-fed printing press or web-fed printing press and the ink is applied to the printing material indirectly via a rubber-covered cylinder.

25

14. The method as claimed in claim 12, characterized in that the relief printing plate is in direct contact with the printing material in a sheet-fed or web-fed printing press.

30

15. The method as claimed in claim 13 or 14, characterized in that the relief printing plate is used in a printing press which also comprises offset printing units.

35

16. The method as claimed in claim 1 or 12, characterized in that the printing material is a fibrous material.

17. The method as claimed in claim 1 or 12, characterized in that the printing material is a film.

18. The method as claimed in claim 1 or 12,
5 characterized in that the printing material is a woven fabric made from natural and/or synthetic fibers.

19. The method as claimed in claim 1 or 12, characterized in that, in the case of absorbent
10 printing materials, precoating, prevarnishing or preprinting with a varnish or preprinting ink is carried out, which reduces the absorption properties.

20. The method as claimed in claim 19, characterized
15 in that the precoating, prevarnishing or preprinting is carried out by means of a direct letterpress printing unit.

21. The method as claimed in claim 19, characterized
20 in that the precoating, prevarnishing or the preprinting ink is applied by means of a relief printing plate indirectly via a rubber-covered cylinder.

25 22. The method as claimed in claim 19, characterized in that the precoating, prevarnishing or the preprinting ink is applied via an offset printing unit.

23. The method as claimed in claim 1 or 12,
30 characterized in that, in order to produce a capacitive element (capacitor), two lines are printed next to one another over a distance, which lines are connected to one another at the ends of the shorter lines.

35 24. The method as claimed in claim 1 or 12, characterized in that, in order to produce a capacitive element (capacitor), first the base line is printed, then an insulator is printed partially in the method as

claimed in claim 1 or 12 and then, in a third work step, the complementary line is printed in the method as claimed in claim 1 or 12.